

## Abstract of the Disclosure

A method for forming an HSG (hemispherical grain) layer on a storage electrode of a capacitor formed on a substrate is provided. The method includes a step of introducing a source gas into a reacting chamber to deposit a small amount of HSG nuclei on a conductive layer pattern of a capacitor electrode during a step of stabilizing the substrate temperature. After the substrate temperature is stabilized, a larger amount of source gas is introduced into the chamber to form additional HSG nuclei.

Thereafter, a step of annealing is performed to form the HSG layer.